

WHAT IS CLAIMED IS:

1        1. A file cache management system for managing a plurality of files operable  
2 to be provided by an application running on a server computer system to at least one  
3 client computer system, wherein at least one of the plurality of files includes  
4 presentation information characterized by a first presentation state, the file cache  
5 management system comprising:

6                a subsequent presentation state computation routine operable to cause at least  
7                one subsequent presentation state to be computed based on the first  
8                presentation state; and  
9                a presentation state signature computation routine operable to determine a  
10                presentation state signature from at least one of the first presentation  
11                state and the at least one subsequent presentation state.

1        2. The file cache management system of claim 1 wherein the server computer  
2 system includes a processor, and wherein at least one of the subsequent presentation  
3 state computation routine and the presentation state signature computation routine is  
4 encoded in a computer readable medium as instructions executable on the processor,  
5 the computer readable medium being one of a magnetic storage medium, an optical  
6 storage medium, and a communications medium conveying signals encoding the  
7 instructions.

1        3. The file cache management system of claim 1 wherein at least a portion of  
2 the presentation information is encoded in a markup language.

1        4. The file cache management system of claim 3 wherein the markup  
2 language is one of Hypertext Markup Language (HTML) and Extensible Markup  
3 Language (XML).

1        5. The file cache management system of claim 1 further comprising a  
2 presentation information computation routine operable to compute subsequent  
3 presentation information based upon the at least one subsequent presentation state.

1        6. The file cache management system of claim 1 wherein the file cache  
2 management system is operable to receive a second presentation state, the file cache  
3 management system further comprising a presentation information computation  
4 routine operable to compute presentation information based upon the second  
5 presentation state.

1        7. The file cache management system of claim 6 wherein the subsequent  
2 presentation state computation routine is operable to cause at least one second  
3 subsequent presentation state to be computed based on the second presentation state.

1        8. The file cache management system of claim 6 wherein the presentation  
2 state signature computation routine is operable to determine a second presentation  
3 state signature from the second presentation state.

*Sub A2*  
1        9. The file cache management system of claim 8 wherein the plurality of files  
2 includes a second presentation file comprising the presentation information based  
3 upon the second presentation state, and a filename based upon the second presentation  
4 state signature.

1        10. The file cache management system of claim 1 wherein the at least one of  
2 the plurality of files includes at least one of the at least one subsequent presentation  
3 state and a presentation state signature from the at least one subsequent presentation  
4 state.

*Sub A3*  
1        11. The file cache management system of claim 1 further comprising a file  
2 cache operable to store at least one of the plurality of files.

1        12. The file cache management system of claim 11 wherein the file cache is a  
2 file server computer system.

1           13. The file cache management system of claim 1 wherein the presentation  
2 state signature computation routine uses a hashing function to determine the  
3 presentation state signature.

1           14. The file cache management system of claim 13 wherein the hashing  
2 function is a one-way hashing function.

1           15. The file cache management system of claim 14 wherein the one-way  
2 hashing function is one of Snefru, N-Hash, MD5, Secure Hash Algorithm (SHA),  
3 RIPE-MD, and HAVAL.

1           16. The file cache management system of claim 1 wherein the at least one of  
2 the plurality of files further includes a subsequent presentation state and a subsequent  
3 presentation state signature.

1           17. The file cache management system of claim 16 wherein the at least one of  
2 the plurality of files further includes a Universal Resource Locator (URL) comprising  
3 the subsequent presentation state and the subsequent presentation state signature.

1           18. The file cache management system of claim 1 wherein the at least one  
2 subsequent presentation state is determined by one or more options selectable by a  
3 user when the user interacts with a presentation caused when the at least one of the  
4 plurality of files is processed by the at least one client computer system.

1           19. The file cache management system of claim 1 wherein the at least one  
2 subsequent presentation state includes subsequent presentation state computation  
3 routine version information.

1           20. The file cache management system of claim 1 wherein the first  
2 presentation state includes version information, the version information describing at  
3 least one of the subsequent presentation state computation routine and data used to  
4 define the first presentation state.

1            21. The file cache management system of claim 1 further comprising a file  
2            cache and a look-ahead manager, the look-ahead manager operable perform at least

4 determining if the file cache includes a file having presentation information  
5 characterized by the at least one subsequent presentation state; and  
6 causing a presentation information computation routine to compute subsequent  
7 presentation information based upon the at least one subsequent  
8 presentation state.

1           22. The file cache management system of claim 21 wherein the determining is  
2 includes searching the file cache for a file having a filename including the  
3 presentation state signature from the at least one subsequent presentation state.

1           23. The file cache management system of claim 1 further comprising a web  
2 server application operable to receive, from the application, the information provided  
3 to the at least one client computer system, wherein the web server is operable to  
4 transmit the information provided to the at least one client computer system.

1           24. The file cache management system of claim 1 wherein the application is a  
2        web server application.

1        25. The ~~file~~ cache management system of claim 1 wherein the application  
2 includes at least one of the subsequent presentation state computation routine and the  
3 presentation state signature computation routine.

1           26. The file cache management system of claim 1 wherein the client computer  
2           system is one of a plurality of interconnected client computer systems operating in a  
3           distributed computing environment and coupled to the server computer system.

1           27. The file cache management system of claim 26 wherein the plurality of  
2 interconnected client computer systems and the server computer system are coupled  
3 via a network.

1           28. The file cache management system of claim 27 wherein network is the  
2 Internet.

1           29. A method of caching a file including presentation information  
2 characterized by a first state, the file operable to be provided by an application  
3 running on a server computer system to at least one client computer system, the  
4 method comprising:

5           receiving a file request including information based on the first state from the  
6           at least one client computer system;  
7           determining whether the file exists in a cache;  
8           retrieving the file and transmitting the file to the at least one client computer  
9           system when the file exists in the cache;  
10           computing presentation information based on the first state when the file does  
11           not exist in the cache; and  
12           saving the computed presentation information in a file in the cache and  
13           transmitting the file to the at least one client computer system.

1           30. The method of claim 29 wherein the file request includes at least one of a  
2 filename based on the first state, and first state information.

1           31. The method of claim 29 wherein the file request includes a filename  
2 computed from first state information using a hash function.

1           32. The method of claim 31 wherein the hash function is a one-way hash  
2 function.

1           33. The method of claim 29 wherein the file request is a URL.

1           34. The method of claim 29 wherein the determining further comprises  
2 monitoring for a file not found error, and causing the computing presentation  
3 information when a file not found error occurs.

1           35. The method of claim 34 wherein the file not found error is an HTTP error  
2    404.

1           36. The method of claim 29 wherein the computing further comprises:  
2           computing at least one subsequent state based on the first state;  
3           computing a signature of the at least one subsequent state based on at least one  
4           subsequent state; and  
5           including the signature of the at least one subsequent state and the at least one  
6           subsequent state in the presentation information.

1           37. The method of claim 29 encoded in a computer readable medium as  
2           instructions executable on a processor, the computer readable medium being one of a  
3           magnetic storage medium, an optical storage medium, and a communications medium  
4           conveying signals encoding the instructions.

1           38. A file encoded in a computer readable medium as instructions executable  
2           on a processor, wherein the computer readable medium is one of a magnetic storage  
3           medium, an optical storage medium, and a communications medium conveying  
4           signals encoding the instructions, the file including:  
5           presentation information characterized by a presentation state; and  
6           a filename computed from the presentation state.

1           39. The file of claim 38 wherein at least a portion of the presentation  
2           information is encoded in a markup language.

1           40. The file of claim 39 wherein the markup language is one of Hypertext  
2           Markup Language (HTML) and Extensible Markup Language (XML).

1           41. The file of claim 38 wherein the filename includes a hash value computed  
2           from the presentation state by a hashing function.

1           42. The file of claim 41 wherein the hashing function is a one-way hashing  
2       function.

1           43. The file of claim 38 further comprising at least one subsequent  
2       presentation state and at least one associated subsequent presentation state signature.

1           44. The file of claim 42 further comprising a Universal Resource Locator  
2       (URL) including the at least one subsequent presentation state and the at least one  
3       associated subsequent presentation state signature.

ADD A1  
ADD B2